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VIA ELECTRONIC MAIL

Ms. Monica Harvey
Virginia Department of Environmental Quality
629 East Main Street
P.O. Box 1105
Richmond, VA 23218

Re: PJM Interconnection L.L.C.'s Comments on the Three Draft State Operating Permits for the Control of SO₂ From the Mirant Potomac River Generating Station.

Dear Ms. Harvey:

The Virginia State Air Pollution Control Board ("Air Board") has requested comments on three draft State Operating Permits ("SOP"), which establish limits for SO₂ emissions from the Potomac River Generating Station ("Potomac River"). In response to the Air Board's request, PJM Interconnection L.L.C. ("PJM") offers the following comments.

Introduction

The Air Board previously requested comments on two draft Consent Orders related to the same issue. On May 4, 2007, PJM filed comments on the draft Consent Orders, focusing generally on the reliability need for the Potomac River Generating Station ("Potomac River"), potentially up to its full capacity, during line outage situations until such time as the relevant PEPCO transmission upgrades are in-service.¹

Given that the primary focus of the draft SOPs is air quality, PJM respectfully defers to the expertise of the parties involved in the development of the draft permits on the specific air quality issues, and, similar to its prior comments, limits these comments to the reliability issue. Where PJM's prior comments discussed the overall reliability need for Potomac River during the June period, the immediate comments quantify the need for Potomac River in definitive terms given the nature of the Operating Permits before the Board.²

¹ In its comments on the draft Consent Orders PJM noted that during the scheduled June line outage, Potomac River would be needed to follow load, and, therefore, the amount of capacity actually needed would vary based on the contingency status and the actual load.

² In its prior comments, PJM believed it would be helpful to the parties to discuss the reliability need for the plant in terms of the worst case scenario – *i.e.* up to the full capacity of the facility. These comments provide more definition to the reliability need to enable the parties to hone the permit limits accordingly.

Consistent with its prior comments, PJM respectfully requests that the Air Board take action in this matter in a manner that will facilitate electric reliability in the Washington D.C. ("DC") area during the relevant time period – *i.e.* June 2007. An effective balance between the air quality issues and the reliability issues is needed to ensure continued reliability of electricity supplies in the national capital area.

Potomac River Operational Scenarios During Line Outage Situations

With the completion of the upgrades to the first 230 kV circuit, the resources available to support the DC area during the second planned outage include the two new 230 kV lines and the Potomac River facility. There are several scenarios that should be accommodated under these operating circumstances.

With both 230 kV lines in-service, Potomac River is needed to meet NERC reliability criteria because PJM operates the system to protect against the loss of load in accordance with the n-1 contingency standard.³ During the upcoming planned outage, the first contingency is the loss of one of the 230 kV lines. Therefore, even with both new 230 kV lines in-service, adequate capacity from Potomac River must be available to protect against the loss of one of those lines. To compensate for the loss of one line, Potomac River must be able to provide enough generation equal to the emergency rating of the line, which is 264 MWs.

If one of the 230 kV lines is not operational, as described above, 264 MWs will be needed from Potomac River to ensure compliance with NERC reliability criteria for the DC area. In addition, it would also be necessary to operate Potomac River to protect against the loss of the remaining 230 kV line. Thus, with only one 230 kV line in service, the remaining capacity of Potomac River – 218 MWs – would need to be available within four hours to protect against the loss of the second line;⁴ PEPCO has informed PJM that it is expected to take four hours to restore a line that experiences an unplanned outage. Operating Potomac River so the remaining 218 MWs is available within that four hour period would ensure the plant could compensate for the loss of both lines (up to its full capacity) based on the emergency or 4-hour rating of the line if the first line could not be restored within the anticipated four hour time frame.

There is one other reliability scenario that should be accounted for in review of the draft Consent Orders and SOPs. Potomac River is comprised of five generating units. In operating the facility to meet the first

³ The n-1 contingency standard essentially means that PJM is required to operate the system to ensure it can maintain reliability with the loss of the first contingency in accordance with PJM operating procedures (PJM Manual 3) and NERC TOP standards.

⁴ In this situation, it is possible that the second line could experience an unplanned outage immediately after the first line. If that were to occur, and Potomac River was operating to provide only the 264 MW to protect against the first contingency, there may not be adequate capacity to meet the NERC reliability criteria for the DC area (while this could happen, it is consistent with the n-1 contingency reliability standard PJM is required to meet). In that situation, PJM would implement Post-Contingency Local Load Relief Warning ("PCLLRW") Procedures to provide advance notice to PEPCO of the potential for manual shedding of load in their service area. This warning will be in effect until sufficient generation is on-line to control the constraint within designated limits and timelines, as described in PJM Manual 3, Transmission Operations, Section 2 – Thermal Operating Guidelines.

contingency (*i.e.* to be able to provide 264 MWs), not all five units would be needed. The problem is that if a generating unit experiences operational problems, additional capacity would have to be brought on-line to replace that unit. If the replacement unit is not operating so that it is readily available, there will be an overlap period where the unit experiencing the operational problem and the replacement unit are both operating. This could result in the output of 80-100 MWs of capacity from the replacement unit, which would be in addition to the 264 MWs until the unit experiencing operational problems is able to be brought off-line. As a consequence, under these circumstances 344-364 MWs of capacity may be needed from Potomac River. However, this status would be short-lived as the total operating capacity would be brought back down to 264 MWs within a reasonable time (e.g. four hours) after the replacement unit reached stable operating conditions.

Operating Potomac River consistent with the scenarios described above should maintain compliance with NERC reliability criteria in the DC area during the second planned outage. Once the upgrades performed during the second planned outage place the third 230 kV line in-service, there will be three operational 230 kV lines serving the DC area during an n-1 contingency and Potomac River will not be needed for compliance with NERC reliability criteria at that point.⁵

SOP Comments

The draft SOPs impose absolute emissions limits without any flexibility for line outage situations.⁶ Furthermore, the draft SOPs require Mirant to reduce operations, or even shut the facility down, at the request of DEQ to avoid violating any primary ambient air quality standard.⁷ In such cases, assuming for purposes of argument that the Secretary of Energy's emergency order would not prevail, the plant cannot resume operations until the potential to violate the relevant standard(s) is no longer an issue.⁸ Finally, all draft SOPs provide for the suspension/revocation of the permits if Mirant, among other things: 1) fails to comply with the terms or conditions of the permit; 2) does not meet the emissions standards; 3) operates the plant so the emissions result in a violation of, or interference with, attainment and maintenance of any ambient air quality standard, and; 4) operates the plant in a manner that does not conform to the State Implementation Plan.⁹

⁵ It should be noted that the upgrades being conducted by PEPCO will meet the NERC reliability criteria for the DC area without the need for Potomac River. However, PJM notes that it has identified NERC reliability criteria violations for the southwest mid-Atlantic region that will be mitigated in 2011 by the new Loudon line, and in 2012 and beyond by additional transmission facilities or alternative means.

⁶ See Paragraphs 9 and 10 of Draft SOP Board Option 1, Paragraphs 13-16 of Draft SOP Board Option 2 and Paragraphs 13-15 of Draft SOP Board Option 3.

⁷ See Paragraph 17 of Draft SOP Board Option 1, Paragraph 22 of Draft SOP Board Option 2 and Paragraph 21 of Draft SOP Board Option 3.

⁸ *Id.*

⁹ See Paragraph 19 of Draft SOP Board Option 1, Paragraph 24 of Draft SOP Board Option 2 and Paragraph 23 of Draft SOP Board Option 3.

These aspects of the draft SOPs, without any provision for operational flexibility during the June line outages, suggest that regulation pursuant to these documents during the June line outage situations may present reliability issues. However, without having a complete understanding of how the limits and other operational restrictions imposed by the draft SOPs affect Mirant's ability to operate Potomac River consistent with the reliability scenarios described above, PJM refrains from affirmatively taking issue with any of the specifics of the relevant drafts. Nevertheless, to the extent any limits, or other operational constraints, effectively prevent the plant from providing the amount of capacity required to maintain compliance with NERC reliability criteria in the DC area during the June line outage situations, PJM urges the Air Board to modify the relevant document(s) to ensure the terms enable Mirant to operate the plant consistent with the reliability scenarios described above.

PJM notes that, in contrast to the draft SOPs, the draft Consent Orders have specific sections that provide Mirant with the authority to operate Potomac River at PJM's direction to maintain reliability during line outage situations, subject to certain restrictions.¹⁰ Accordingly, to the extent one of the draft Consent Orders enables Mirant to operate Potomac River consistent with the line outage operational scenarios described above, PJM recommends approving such Consent Order for a period of time that is adequate to cover the second planned line outage (i.e. June 2007), plus an adequate buffer time period after completion of the upgrades to ensure the transmission upgrades are fully functional.

If the Air Board foregoes the draft Consent Orders, and instead imposes one of the SOPs, it should modify the relevant document to ensure it enables Mirant to operate Potomac River so as to maintain compliance with NERC reliability criteria in the DC area during the relevant line outage periods.

Conclusion

Imposing limits that prevent Mirant from being able to operate Potomac River to meet the reliability needs of DC during line outage situations will force the company to choose between restricting plant output when it may otherwise be needed for reliability, or face potential penalties for emissions violations. The risk to reliability created by such a situation should not be sanctioned by the Air Board.

To remove any reliability risk, DEQ and the Air Board should ensure that any Consent Order and/or SOP enables Mirant to operate Potomac River at PJM's direction consistent with the above scenarios. PJM takes no position on the means utilized to achieve this result, but notes the use of appropriate releases for operation during line outages, such as in the ACO, has facilitated the ability of Potomac River to operate at PJM's direction and maintain reliability in the DC area in a manner that is consistent with the DOE Emergency Order,¹¹ which Mirant is also obligated to comply with.¹²

¹⁰ To the extent that any emissions limit or operational restrictions in the draft Consent Orders function to limit/restrict the ability of Mirant to operate the plant at PJM's direction, consistent with the DOE Emergency Order, PJM urges the Air Board to modify such limits/restrictions accordingly.

¹¹ See District of Columbia Public Service Commission, Order No. 202-05-3, issued in Docket No. EO-05-01.

¹² Providing Mirant with the authority to follow PJM's operational direction during line outages, consistent with the DOE Emergency Order, should ensure compliance with NERC reliability criteria in the DC area. However, if the Consent Order and/or SOP then undermines that authority by the imposition of fixed emissions limits, or operating scenarios, that could either

The period in question – i.e. until the PEPCO transmission upgrades for the second existing 230 kV line are operational – is anticipated to be limited to the month of June. PJM respectfully requests that the Air Board approve a Consent Order and/or SOP that enables Mirant to operate Potomac River consistent with the DOE Emergency Order so electric reliability in the DC area is not compromised during this relatively short period.

PJM thanks the Air Board for providing the opportunity to comment on this important issue and would be pleased to assist further in this matter to the extent the Air Board has any additional questions on the reliability issue.

Sincerely,



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cc: Michael J. Kormos, Sr. VP, Reliability Services
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Craig Glazer, Vice President – Federal Government Policy
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prevent Mirant from supplying the requisite generation, or result in emissions violations, then, absent an appropriate liability release, the relevant document does not produce a result that is consistent with guaranteeing reliability in the DC area for the short time period in question. The reason that type of qualified authority is problematic from a reliability perspective is that assuming the Secretary of Energy's emergency order does not take precedent, it forces Mirant to either violate its environmental permits, or the DOE Emergency Order, with no protection for either violation. Consequently, if Mirant elects to shut its units down to avoid violating its environmental permits (i.e. either the Consent Order and/or SOP), such action could impact reliability depending on the load in the DC area.

